

CLAIMS

What is claimed is:

- 1 1. A method for scanning media, the method comprising:
2 scanning a platen using a dedicated preview image sensor; and
3 pre-processing image data obtained through the scanning of the platen to
4 automatically determine settings to apply during a subsequent final scan.

- 1 2. The method of claim 1, wherein scanning a platen comprises scanning
2 the platen using a dedicated preview image sensor having a resolution of
3 approximately 30-150 pixels per inch (ppi).

- 1 3. The method of claim 1, wherein scanning a platen comprises scanning
2 the platen using a dedicated preview image sensor that is fixed within a scanning unit
3 of an imaging device.

- 1 4. The method of claim 1, wherein scanning a platen comprises capturing
2 an image of the entire media using the dedicated preview image sensor
3 instantaneously.

1 5. The method of claim 1, wherein pre-processing comprises at least one
2 of performing automatic copy type detection, automatic document size detection,
3 automatic skew detection, zoning analysis, background/foreground determination,
4 document classification, template matching, and an ink requirement estimate.

1 6. The method of claim 1, further comprising scanning the media at a
2 relatively high resolution using a high-resolution image sensor that is separate from
3 the dedicated preview image sensor.

1 7. The method of claim 6, wherein scanning the media at a relatively high
2 resolution comprises scanning the media using at least one setting that was determined
3 through the pre-processing.

1 8. A system for scanning media, the system comprising:
2 dedicated means for preview scanning;
3 means for pre-processing image data obtained from the means for preview
4 scanning;
5 means for determining settings to apply during a final scan; and
6 means for final scanning the media.

1 9. The system of claim 8, wherein the means for preview scanning
2 comprise a dedicated preview image sensor.

1 10. The system of claim 9, wherein the dedicated preview image sensor has
2 a resolution of approximately 30-150 pixels per inch (ppi).

1 11. The system of claim 9, wherein the dedicated preview image sensor is
2 fixed within a scanning unit of an imaging device.

1 12. The system of claim 9, wherein the dedicated preview image sensor is
2 configured to capture an image of the media instantaneously.

1 13. The system of claim 8, wherein the means for pre-processing
2 comprises an image processor of a scanning unit.

1 14. The system of claim 13, wherein the image processor is configured to
2 perform at least one of automatic copy type detection, automatic document size
3 detection, automatic skew detection, zoning analysis, background/foreground
4 determination, document classification, template matching, and an ink requirement
5 estimate.

1 15. The system of claim 8, wherein the means for final scanning comprise
2 a high-resolution image sensor.

1 16. The system of claim 8, wherein the means for preview scanning
2 comprise a dedicated preview image sensor having a resolution of approximately 75
3 points per inch (ppi) and the means for final scanning the media comprise a high-
4 resolution image sensor having a resolution of approximately 600 ppi.

1 17. A scanning unit for use in an imaging device, comprising:
2 a dedicated preview scanning module comprising a first image sensor having a
3 first resolution;
4 a final scanning module comprising a second image sensor having a second
5 resolution that is higher than the first resolution; and
6 an image processor that is configured to pre-process image data collected by
7 the dedicated preview scanning module to determine settings to be used to operate the
8 final scanning module.

1 18. The scanning unit of claim 17, wherein the dedicated preview scanning
2 module is fixed within the scanning unit so as not to be movable within the unit.

1 19. The scanning unit of claim 17, wherein the dedicated scanning module
2 is displaceable to facilitate scanning.

1 20. The scanning unit of claim 17, further comprising a platen on which
2 media may be placed, wherein the dedicated preview scanning module is positioned
3 directly opposite the platen such that the first image sensor directly faces the platen.

1 21. The scanning unit of claim 17, further comprising a platen on which
2 media may be placed, wherein the dedicated preview scanning module is positioned at
3 an angle relative to the platen such that the first image sensor does not directly face
4 the platen.

1 22. The scanning unit of claim 17, wherein the dedicated preview scanning
2 module further comprises a wide angle lens.

1 23. The scanning unit of claim 17, wherein the image processor comprises
2 at least one processing algorithm and a buffer.

1 24. The scanning unit of claim 17, further comprising a light source that is
2 configured to facilitate delivery of reflected light to the first image sensor of the
3 dedicated preview scanning module.

1 25. The scanning unit of claim 24, further comprising a reflector that is
2 configured to facilitate delivery of reflected light to the first image sensor of the
3 dedicated preview scanning module.

1 26. The scanning unit of claim 17, wherein first image sensor has a
2 resolution of approximately 75 points per inch (ppi) and the second image sensor has
3 a resolution of approximately 600 ppi.

1 27. An imaging device, comprising:
2 a scanning unit including a dedicated preview scanning module, a final
3 scanning module, and an image processor that is configured to pre-process image data
4 collected by the dedicated preview scanning module to determine settings to be used
5 to operate the final scanning module; and
6 a printing module that is configured to generate hard copy documents from
7 received image data.

1 28. The imaging device of claim 27, wherein the dedicated preview
2 scanning module comprises a low-resolution image sensor.

1 29. The scanning unit of claim 28, wherein low-resolution image sensor
2 has a resolution of approximately 75 points per inch (ppi).

1 30. The imaging device of claim 28, wherein the dedicated preview
2 scanning module is fixed within the scanning unit.

1 31. The imaging device of claim 27, wherein the final scanning module
2 comprises a high-resolution image sensor.

1 32. The imaging device of claim 31, wherein the high-resolution image
2 sensor has a resolution of approximately 600 points per inch (ppi).

1 33. The imaging device of claim 27, further comprising a platen on which
2 media may be placed, wherein the dedicated preview scanning module is positioned
3 directly opposite the platen such an image sensor of the dedicated preview scanning
4 module directly faces the platen.

1 34. The imaging device of claim 27, further comprising a platen on which
2 media may be placed, wherein the dedicated preview scanning module is positioned at
3 an angle relative to the platen such that an image sensor of the dedicated preview
4 scanning module does not directly face the platen.